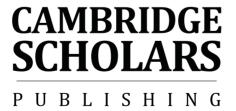
Contemporary Perspectives and Research on Early Childhood Education

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Edited by

Mustafa Yasar, Ozkan Ozgun and Jeanne Galbraith



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CONTEMPORARY PERSPECTIVES AND RESEARCH ON EARLY CHILDHOOD EDUCATION: AN INTRODUCTION

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Contemporary Perspectives and Research on Early Childhood Education is a welcome addition to the field of early childhood education, which encompasses a wide range of issues related to children from birth to age eight. Although early childhood education is a relatively new field, it witnesses significant growth around the world. Different approaches and perspectives significantly contribute to this growth and enhance our knowledge and understanding of theory and practice. As the editors and authors of this book, we believe that education is both a basic human right and a vital means for promoting peace, respect and freedom. We are well aware of the fact that investment in the early years of life gives the greatest payback. Thus, high quality early childhood education must be made universally available and equally accessible to all children, especially to disadvantaged ones.

Since the field of early childhood education incorporates a variety of contexts and settings, and diverse approaches, it is crucial to recognise the vital role of culture, ecology and economical systems while providing educational services to young children. Research plays a major role in the quest of providing high quality early childhood education, implementing the best practice principles and caring for typically-developing children and children with disabilities. Accordingly, it pays dividends to exchange different perspectives and research findings among researchers and practitioners about high-quality programs. Therefore, this volume aims to

create a platform for researchers and practitioners to share and discuss research findings, expertise and experiences about early childhood education.

This book includes well-known early childhood education researchers including Lilian Katz and Kathy C. Trundle from the United States, and Garry Hornby from New Zealand. Their contributions highlight key knowledge and perspectives about early childhood curriculum, particularly the Project Approach, science in early childhood education, and a model for parent involvement. Besides these scholars, this book sets the stage for the other researchers studying early childhood education from crosscultural perspectives including Turkey, Iran, Greece and the United States. This cross-cultural approach enriches our overall understanding and perspectives on multiple issues in early childhood education. Specifically, this compilation of research enhances our understanding of different approaches to curriculum and instruction for teaching young children; appropriate assessment strategies to understand children's development and learning; the role of math and science in children's development; the importance of seeing the whole child and ensuring children develop holistically through play and arts (music, art, drama); training effective teachers, and the importance of helping parents to be better supporters of their children both at home and at schools. Along with this comprehensive content, this book also contains diverse methodologies including qualitative, quantitative and mixed-method approaches, which further enrich our perspective and understanding on a wide range of topics in the field

The Organization of this Book

The volume is divided into eight parts encompassing the major topics influencing the field of early childhood education, including curriculum, assessment, science and mathematics, play and the arts, teacher training, parent involvement, issues in parenting, and current issues in the field.

Part 1 is devoted to early childhood curriculum and different approaches to early childhood education. World-renowned early childhood educator, Lilian Katz sets the foundation of this part with her introductory chapter overviewing the Project Approach. In her chapter, Katz puts a frame for the Project Approach while also emphasizing what all educational practice should be built upon. In the second chapter, Ahmetoglu and Ercan investigate the perceptions of preschool teachers

about problem-solving skills related to different variables. Ahmetoglu and Ercan show in their chapter how personal issues such as being married or having kids influence pre-service teachers' perspectives on problemsolving skills. Similarly, in the third chapter, Karabay and Kusdemir Kayiran focus on pre-service teachers' perception on practices about early literacy activities. Gourgiotou, in her chapter, investigates the trainee teachers' experiences during their practicum by utilizing a differentiating instructional framework. Gourgiotou illustrates how teacher trainees could deepen their understanding of their roles in the classroom and improve their teaching strategies. Along with these studies, Yildirim and Akman, in the fifth chapter, explore the opinions of in-service and pre-service teachers regarding creative problem-solving practices. Also within this part, Park and Bauserman describe the Piramide Approach based on an observational study of the use of this approach in an early childhood classroom in the United States. Finally, Yasar and Yanik question the value of competitive games with rules in preschool classrooms. Yasar and Yanik provide an experiential and theoretical position against the use of competitive games in teaching young children.

Part 2 presents chapters about cognitive, language and emotional development of young children. This part also focuses on different aspects of assessment processes in early childhood period. In the initial chapter, Durak Demirhan ve Oktay address how children's cognitive tempo (i.e. impulsive-reflective) correlates with their behavioural problems in the classroom. The next chapter, Asli and Hamed also examine children's development, this time their language development. In their chapter, Asli and Hamed compare children's development of English phrase structure between children whose primary language is Azeri Turkish and Persian. In the next chapter, Isikoglu Erdogan, Kucuker and Curuk investigate children's understanding of disability in inclusive early childhood classrooms. This part concludes with a study by Koksal Akyol and Aslan that focuses on understanding children's development of empathy.

Part 3 is devoted to perspectives and research in science and mathematics in early childhood education. It is essential to understand the most developmentally appropriate methods for integrating science, math and other areas of early childhood curriculum. The studies in this part commence with an opening chapter from Kathy C. Trundle. In her chapter, Trundle sets a foundation for this part with an overview of children's understanding of science and effective science teaching in early childhood. Specifically, in chapter 13, Aslan, Aktas Arnas and Hayta investigate mathematical activities parents engage with their children at home by

taking socioeconomic status into account. They conclude that SES is an important factor in the types of mathematical activities parents engaged with their children at home. In the next chapter, Bal explores pre-service teachers' beliefs about problem-solving in mathematics and these teachers' attitudes towards mathematics. In the next chapter, Zembat, Sezer, Kocyigit and Balci focus on preschool teachers' beliefs about geometry in relation to geometry teaching during the early childhood period. In the following chapter. Ev Cimen, Yenilmez and Yemenli provide a review on the aims and contents of the programs of a private TV channel (BabyTV) from the perspective of preschool mathematics education. Ev Cimen et al. conclude that some of the programs had significant mathematical content of an educational nature suitable for toddlers, however, they also suggest that TV programs should be used for young children's entertainment and education with caution. Finally, in the last chapter of Part 3, Akman, Alabay and Yildirim compare the attitudes of preschool teachers toward science education and the inventions of children

Part 4 is dedicated to the studies related to play, music, drama and arts in early childhood education. This part includes studies examining ceramics education and emotional regulation, preschool teachers' attitudes to creative drama, children's rights to play at home and school, and the development of aesthetic appreciation. In the first chapter of Part 4, Aral, Gursoy, Yildiz Bicakci and Aysu present their study on whether ceramics education has an effect on children's ability to regulate their emotions. In the next chapter, Ozer and Gonen examine preschool teachers' approaches to creative drama, their status of applying various drama activities and teachers' reasoning behind using or not using drama. In the following chapter, Ramazan, Guven and Sezer present young children's perspectives on whether they think their mothers and teachers respect their right to play at home and at school. Finally, Erdem and Dogan explore children's aesthetic perception of a visual stimulus in motion and suggest that children display the ability to respond to aesthetic stimuli on a certain level

Part 5 focuses on studies examining issues in teacher training for early childhood education. Teacher training and effective practices for teacher development are significant areas of research in their own right. The topics in this part focus on the relationship between inclusion and problemsolving, teachers' engagement in science education, and attitudes of male teachers towards the teaching profession. In the opening chapter, Ahmetoglu and Ercan explore the relationship between preschool

teachers' views about inclusion and their perception of problem-solving skills. Ahmetoglu and Ercan illustrate that the more a teacher was confident in his or her problem-solving skills, the more he or she would develop positive attitudes towards inclusive education. In the next chapter, Kumtepe, Erdogan, Oren, Alan, and Ozarda propose a professional development program for early childhood teachers and discuss this program's impact on teachers' understanding of the nature of science, scientific process skills and science content knowledge. Kumtepe et al. present evidence about how this professional development program helped teachers to overcome their fear of science and gain confidence and a more positive attitude towards science and teaching science. In the final chapter, Buyukbayraktar, Konuk Er, Alakoc Pirpir, Yildiz Cicekler, and Yilmaz examine attitudes of pre-service male teachers towards teaching profession, which is an important contribution to the limited research on male teachers in a profession of predominantly female teachers.

Part 6 focuses on parental involvement and education. This part begins with a comprehensive overview of Garry Hornby's parental involvement model from New Zealand. Hornby discusses parental involvement from an international perspective, the benefits and importance of involving parents in their children's school lives, and the barriers of parental involvement. In the following chapter, Yildiz and Can focus on the opinions of teachers with regard to home visits. They present evidence that while carrying out the home visits, teachers experience some difficulties, such as transportation, shortage of time and planning problems. Yalcin and Kocak, in their chapter, examine how the Training Program for Baby Care alters the non-functional belief and practices of expectant mothers related to infant care. In the next chapter, Aygun and Yildizbas explore teachers' and parents' views about family participation activities in preschool education and the contribution of these activities to family education. Aygun and Yildizbas report that parents had a positive perception about family participation activities and these activities strengthened parents' involvement in their children's school life. In the last chapter, Zeteroglu and Turasli report that parent education provided to mothers with low levels of education helped these mothers to become more efficacious parents by decreasing their negative beliefs and practices related to childrearing.

Part 7 explores issues in parenting. This part begins with Atabey and Tezel Sahin's investigation of the perspectives of parents about their communication and relationships with their child's preschool teacher. The second chapter in this part by Tantekin Erden and Altun focuses on the

relationship between child's gender and parents' toy selection. Tantekin Erden and Altun conclude that the gender of the child was an important factor for Turkish parents when purchasing toys for their children. The next study by Tadi and Mofidi examine the relationship between different styles of parenting and behaviour problems of 4- to 6-year-old girls. Tadi and Mofidi found a correlation between authoritarian parenting-style and girls' problematic behaviours (e.g. distraction, aggression and anxiety). The chapter by Ural, Guven, Azkeskin and Gural involved the development of a scale to analyze parent's child-rearing styles. Ural et al. concluded that children with democratic parents found to: i) be more successful in their friendships, ii) produce more creative ideas and views. iii) take more initiative, iv) explain their views and opinions more productively, and v) have more highly developed decision-making skills and strategies. Authors also stated that the naming procedure of Parenting Styles Scale should be re-examined for suitability in future studies according to validity and reliability analysis results of the scale. The part concludes with a study by Erden, Ozgun and Aydilek Ciftci, in which the authors compared parents' perceptions and children's perceptions of parenting style. Interestingly, Erden et al. found very few similarities between children's and parents' reports of parenting styles. While parents tended to overrate their positive parenting behaviours, children tended to underrate their parents' positive parenting behaviours.

Part 8 focuses on current issues in early childhood education. The first chapter of this part by Bayhan and Erdem look at developmentally appropriate practice (DAP) and brain research in order to re-evaluate DAP's main principles. Bayhan and Erdem also emphasize the link between DAP and brain research and elaborate on the results of research related to DAP and brain development. In the next chapter, Okutan, Tepeli, Tugrul, and Gunes compare mixed-age and isolated-age groups in preschool classrooms and conclude that in mixed age groups, children have a better chance of encountering richer experiences. In the following chapter. Tepeli, Yilmaz, and Kuvucu examine the relationship between maternal acceptance/rejection and children's emotional recognition skills and conclude that mothers who showed closeness, love and warmth had children with better emotion-recognition skills. In their chapter, Tezel Sahin, Kandir, Gelisli, and Yazici investigate preschoolers' perception of violence and report that even very young children had witnessed violence in many different settings and unfortunately they also had been victims of violence. Adagideli and Ader conclude the volume by reporting the findings from an observational study of young children's metacognitive

abilities. Adagideli and Ader found that young children, as young as 4 year olds, demonstrate various components of metacognitive abilities, both during activities and during reflective dialogues.

We are very grateful for the contributions of all of the authors and researchers. The diverse range of studies and perspectives allow us to create a book about diverse approaches and cross-cultural perspectives. We are especially thankful for the invaluable contributions to this work from Lilian Katz, Garry Hornby, and Kathy C. Trundle.

PART 1:

EARLY CHILDHOOD CURRICULUM AND DIFFERENT APPROACHES

CHAPTER ONE

BUILDING A GOOD FOUNDATION: THE PROJECT APPROACH

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1. Introductory Comments

I want to share with you the most recent understandings of how best to support young children's development. My ideas are based primarily on my experience and the research in North America, although I have lectured in 55 other countries, and have been a Visiting Professor in 7 others. My plan is to outline recent insights into young children's growth, development and learning, and show you some examples of how projects can support these.

2. Principles of Early Growth, Development and Learning

Not long ago I was asked to give the opening address at a conference for which the main theme was "Building a Good Foundation." I wondered for quite a while about how best to think about how a teacher of young children can build a good foundation. My husband, who was a civil engineer who designed buildings, was still living at that time. So, I asked him: What are the principles you use when you design the foundations of buildings? He then explained that there are four important main principles involved in designing the foundations of building:

1. You have to find out everything you can about the nature of the soil the building will be standing on.

In terms of early education, this suggests that a teacher has to find out everything she (or he) can about each child. The teacher needs to know

what experiences the child has already had or not, and about the child's needs and feelings, family members, personality, etc.

2. You have to be clear about what kind of structure you want to put on the foundation.

This principle, applied to early education, means that we have to be clear about what kinds of qualities we want our children to have now as well as when they grow up. We need to be clear about how the qualities we want our children to have can best be fostered in the early years. For example, we need to know how to ensure that they will continue to have the dispositions throughout life to seek important knowledge and understanding, to use and acquire new skills, and to express and cope with a wide range of feelings while they are growing up and becoming adults.

3. You have to find out everything you can about the forces that will be acting on the building, e.g. earthquakes, hurricanes, tornadoes, heavy snow, etc.

This principle suggests that educators must be aware of the kinds of influences that their children now and in the future will experience in their communities and in wider society.

4. If you do not build the foundation properly, it can be very dangerous and very expensive to repair.

This principle reminds us that if we do not make sure the early years are good ones for our children, their development might not be healthy, and as they get older, it may be very difficult to correct this.

I want to suggest that these principles:

- Apply very well to our work with young children, and furthermore,
- That they suggest that we must resist the temptation to start our young children on the third floor!
- In other words, our teaching should be developmentally appropriate for their age and experience,
- And starting formal schooling earlier is not likely to be good for them.

So, again, let's not start them on the third floor!

I propose to address the nature of early childhood development and some basic principles of how to build a solid foundation based on recent research and extensive experience with a wide variety of young children.

3. Basic Principles of Teaching Young Children

It is useful to keep in mind that anyone who has to design a curriculum, - i.e. a plan for learning - at any level for any subject, whether it is for training dieticians, or engineers, or historians, or bankers, must address four basic questions:

First Question: What should be learned? To answer this question we must think about the aims, goals and objectives for which the curriculum is a plan.

Second Question: When should it be learned? Answers to this question address the nature of development as well as sequences in which things should or can best be learned.

Third Question: Once we have decided what should be learned, the next question is: How is it best learned? The answers to this question depend on the answers to the first two questions.

There is a Fourth question: How can we tell how well we have answered the first 3 questions? This question is about evaluation, assessment, and the effects of what we do with young children. There is currently much talk about performance standards, benchmarks, outcomes, testing, etc. While there is not enough time to discuss these complex issues in this chapter, I do want to make two points about evaluation:

One is the important question of when we see the really important effects of what we do with young children. I will come back to this issue a little later.

Another problem is that taking tests is very difficult for young children. So the question is about how to measure or assess the effectiveness of an early childhood programme.

I want to present some answers to these questions and related issues based on recent research and experience.

3.1. The First Question: What should be Learned in the Early Years?

What should be learned? In terms of principles of practice, I offer the following list:

Principle #1. What we teach and how we teach changes with age and the experience that comes with age.

This is what it means to take a developmental approach to this question. For example, we all agree that we want our children to learn to read and write etc. But we do not all agree about when they should learn these things. So what should young children be learning (keeping in mind that children always learn, though not necessarily what we want them to learn)?

To answer this first question, what we know and understand about human development must be taken into account. It helps to think about this first question in terms of four different types of learning goals:

Learning Goal Type #1 - Knowledge and understanding

I have recently decided to put the two terms knowledge and understanding together for several reasons. We want to help young children to know things like how old they are, but we also have a role in helping them to gradually understand concepts of time like a month and a year and thus, eventually, what age means.

Principle #2. The overall goal of early education is to help young children to make better, fuller, deeper, and more accurate sense of their own experience.

As they get older, it is important to make better, fuller, and deeper sense of others' experiences, those who are far away in time (history) and in place (geography). But for young ones, from a developmental perspective, a major learning goal is to help them to make increasingly better and fuller and more accurate sense of their own first hand experience. One of the main purposes of involving young children in project work is to support their natural disposition to make the best sense they can of their own experiences and environments. Through project work they conduct investigations of significant events and phenomena in their own environments and experiences worth learning more about.

Learning Goal Type #2 – Skills

Skills are different from knowledge and understanding. They are small segments of behaviour, usually directly observable, and there are very many skills of different kinds being learned in the early years: verbal skills, social skills, physical skills – there are, in fact, hundreds of skills to be learned in the early years.

Unlike knowledge and understanding, skills are units of behaviour that usually require some practice to achieve skilfulness. Which skills should we emphasize in the preschool years? I will talk about some of the many social skills that must be learned in the early years.

Learning Goal Type #3 - Dispositions

Dispositions are hard to define. It helps to think of them as habits of mind with intentions, and motives. (They are not the same as attitudes). For example, think of the distinction between having reading skills and having the disposition to be a reader. Or think of the difference between having listening skills and having the disposition to be a listener – the habit of listening to adults, teachers, and so forth.

We want all children to learn to read and at the same time to have the disposition to be readers. It is not much use having reading skills if learning them has been so difficult or unpleasant that the disposition to be a reader has not been acquired. On the other hand, it would not be very useful to have the disposition to be a reader without having the necessary skills to satisfy the disposition to read. We must always try to help children to acquire important skills and at the same time the disposition to use them.

Some more main points about dispositions

Dispositions cannot be learned from instruction. But they can be damaged by instruction, especially if the instruction is too intense, too early, and too formal. The most important dispositions are inborn, e.g. dispositions to learn (again, not necessarily what we want children to learn), to make sense of experience, though these are of course stronger in some individuals than in others. The dispositions to relate to others, cooperate and protect oneself are largely inborn in all of us. So probably are many other important dispositions.

Not all dispositions, of course, are desirable ones – e. g. the disposition to be quarrelsome, to be bossy, to be suspicious, to be miserly or to be critical, or ungenerous in contrast to being generous or charitable. But, unless young children are growing up in a chaotic environment (which, by definition, does not make sense) it is important for teachers of young children to assume that all children have the disposition to make the best sense they can of their experience.

Many dispositions are also learned from being around people who have them (e. g. parents and teachers) and observing those dispositions in their behaviour. There is research, for example, to indicate that children

who are accustomed to seeing adults read (regardless of what it is that they are reading, e.g. the newspaper) seem to accept the importance of working at learning to read more readily than those not used to such observations.

So we should ask ourselves (as parents and teachers): Can the dispositions we want our children to have be seen by them in us? For example, a child might ask his or her teacher a question about something and the teacher might not know the answer, and then the teacher could say something like "I'll see what I can find out about that." Then the next day the teacher comes back to that child and says something like "I was thinking about the question you asked me yesterday, and I talked to a neighbour who knows a lot about that and this is what I found out," and so forth. Similarly, it may help children to observe adults engaged in considering alternative solutions to problems. So a teacher might say to some children in the class - or perhaps to all of them - "I've been wondering whether that's the best place to put the new book shelf... Do you have any thoughts about that?" It must be a genuine question, and not phony -- do not be phony with children! Always be genuine, and use real instances of considering alternative courses of action that most of the children can understand

Learning Goal #4 - Feelings

Many feeling capacities are, of course, typically inborn. The capacities for feelings of fear, anxiety or joy do not need to be taught. But many important feelings are learned from experience – feelings of belonging and of not belonging. Similarly, feelings of confidence, high or low, are learned from experience.

Feelings cannot be learned from instruction, exhortation, indoctrination, although adults do have a role in helping children to learn appropriate feelings. For example, when a child behaves as though it is a major tragedy when he or she does not get a turn with a toy or a tricycle, the teacher can calmly say to the child something like "I understand that you are disappointed that you didn't get a turn with XXX. But there is always tomorrow. So find something else to do for now."

In the US, perhaps more than in other countries, there is much talk about feelings of self-esteem. Self-esteem is a much misunderstood concept that we do not have space to examine in detail in this chapter. But I want to suggest that it is better for teachers of young children to focus on feelings of confidence and competence rather than self-esteem.

It is a good idea to keep in mind that self-confidence can be strengthened when children have some (but not too much) experience of overcoming occasional difficulties, of solving problems and of dealing with low moments. Keep in mind also that children cannot get self-esteem or self-confidence from empty flattery or excessive general praise. Children do benefit from what is called 'informative feedback', that is positive feedback that contains specific reference to the task or action the child has performed, and not just vague empty praise.

It is important to speak to children clearly, honestly, matter-of-factly – not with high or strong emotion. And then change the subject - change the content of the relationship so that it is focused on what the child plans to do, is thinking about, problems he or she can work on, etc.

But there must be something interesting and real to talk about. That is one reason why I emphasize the importance of including projects in the curriculum: they provide many real, important and interesting topics to talk about

Principle #3. The younger the children, the greater the role of adults in helping them to achieve social competence.

This is a very big topic and cannot be fully addressed here. But, I do want to emphasize that addressing young children's social development is part of building a good foundation. There is now a very large body of research on the long-term benefits of early social development and the difficulties of helping children whose early social problems are not solved. The evidence now indicates that unless a child achieves at least a minimal level of social competence by the time he or she is about six years old, that child is at risk for many kinds of social difficulties for the rest of his/her life

Parents obviously have the greatest role in helping young children's social-emotional development, from the moment they are born. The help and support that is needed for healthy social development has to be given early – within the first five or six years of life.

There is also some evidence that children who are rejected by their peers in the early years eventually find each other and develop strong relationships with each other. This small group of peer-rejected children come to feel close to each other because of their common negative feelings or anger and disappointment toward the group of peers who rejected them. As they grow older these groups often form what we call them 'gangs' which often present a danger to the larger society that rejected them. They share with their fellow-rejected peers the experience or having been rejected when they were younger and their closeness with each other is based on shared bitterness and hostility for the rest of society.

To quote W. W. Hartup:

Indeed, the single best childhood predictor of adult adaptation is not IQ, not school grades, and not classroom behaviour but, rather the adequacy with which the child gets along with other children. Children who are generally disliked, who are aggressive and disruptive, who are unable to sustain close relationships with other children, and who cannot establish a place for themselves in the peer culture are seriously "at risk". (Hartup, 1992)

The elements of social competence are not usually learned through instruction, lessons, lecturing or preaching. Scolding and preaching about being nice are the wrong content for relationships between teachers and children. As we will see, by implementing the Project Approach, children benefit from having frequent opportunities for small group work in which individual members of the group can make their own contributions to the achievement of the larger group or whole class.

In the US and some other countries, a lot of disruptive behaviour in the preschool classroom (as well as at the early elementary level) is often due in some part to boredom with the curriculum – so the children make things interesting and lively their own way!

3.2. The Second Question: When is it Best Learned?

Once it has been decided what children should learn, the next question is when should it be learned?

Principle #4. What children should learn and should do must be decided on the basis of what best serves their development in the long term.

Yes, we can make children do the calendar ritual every day. But until children are about six years old, they do not really or fully understand the calendar, and as much as 15 or 20 minutes a day can be wasted. I observed a teacher of a class of five-year-olds in the UK who asked the children the question "What is a week?" One child quickly responded with great certainty "It is short for weekend!" The teacher ignored the response, but we might ask what might have been the best way to respond to that child's response.

Unless children have early and frequent experience of what it feels like to understand something in depth, they cannot acquire the disposition to seek in-depth knowledge and understanding. Ideally, in terms of the kind of structure we want to build on our foundation, the disposition to seek indepth knowledge and understanding should be a life-long one.

Another important thing to keep in mind about dispositions is that once they are lost they cannot easily be put back in again later. For example, the disposition to seek greater knowledge and understanding - if lost early - may be lost forever.

Principle #5. It is very important to distinguish between academic and intellectual goals.

As children grow older, we must of course address both academic and intellectual goals. But, the younger they are, the more important it is to support and strengthen their inborn intellectual dispositions.

It may help to distinguish between the two.

Academic learning

Academic knowledge is about specific small bits of information, knowledge or skills, e.g. the alphabet, phonemes, grammar, punctuation, etc. In early education, it might also include the days of the week, the names of the months, etc.

They are items of information and/or knowledge that can be correct or incorrect.

They are usually first learned out of context.

They are items that have to be memorized.

Academic work usually includes worksheets, exercises and practice.

Intellectual learning

This refers to mental dispositions. For example, to try to make sense of what you are experiencing, to analyse information, to synthesize information, to predict what might happen if X or Y ..., to theorize how things happen, how they work and where they come from, to try to figure out relationships of cause and effect, to struggle to understand and/or make sense of observations, to predict what they might see when they go somewhere, to hypothesize (if you do A, then B might or will happen), etc.

Principle #6. Introduction to formal academic instruction too early and too intensely may result in children learning the academic details, but at the expense of the dispositions to use them.

As I have already suggested, there is not much use in acquiring skills if the processes of acquiring and learning them are either so painful or so boring that the dispositions to use them can be damaged instead of strengthened. There is research showing that when preschool children are in two different kinds of preschool curricula, one formal and academic, the other based on more child-initiated activity, the children following the academic curriculum perform better on tests than the children in the other group. But when the researchers followed the children after preschool and tested them later in elementary school classes, the same children did not do better on the tests. On the contrary, the children in the more child-initiated curriculum did better – in the long term.

In many countries children come to school with different levels of exposure to academic types of activities, e.g. counting things, reading signs, having books read to them, hearing and learning stories, songs, holding pencils, trying to write their names, and so forth. This means that they vary in school readiness-related skills. But I strongly recommend to teachers that it is important to make the assumption that all children come to school with powerful intellectual dispositions — e.g. the disposition to make the best sense of their experiences that they can.

As I already suggested, unless a child is growing in a chaotic environment (which, by definition, does not make sense), children will come to us strongly motivated to try to figure things out, to understand what is happening around them, how things work, and to make the best sense they can of their own experiences. It is important not to confuse socioeconomic status with intellectual powers, even though it may be related to academic readiness. This is another reason why the Project Approach is an appropriate part of the curriculum – it is aimed at helping children to investigate their own environments and find out more about what goes on in them, what people do, how things work, etc. etc.

3.3. Question #3 – How is all this Best Learned?

Given this view of what should be learned and when it should be learned, how is all this best learned?

Principle #7. The younger the children, the more they learn through interactive experiences.

The younger the child the more he or she will learn through direct firsthand experience rather than indirect or second-hand experiences. That does not mean that children do not learn through passive, receptive experiences. They do learn some things from stories, movies and television – including, perhaps, the wrong things!

But the disposition to go on learning, which is the goal of all education (i.e. life-long learning), the disposition to master knowledge that is not yet known, requires interactive processes like discussion and argument, and could also benefit from experience of being in mixed-age groups. Mixedage grouping provides a wide range of rich learning and teaching experiences for the children.

Principle #8. Young children need extensive experience of continuous contingent interactions.

This means that very young children need frequent interactions over a period of time, for example a series of one-to-one exchanges, of smiles or of clapping, etc.. The best example of a continuous contingent interaction is a conversation. A conversation is a series of interactions – including smiles or nods and so on – in which each participant's response is related to, i.e. contingent on, the preceding one.

From very early in life, such continuous interaction stimulates the development of the neurological connections between the mid-brain and the prefrontal cortex. The mid-brain is the source of emotions and motives. The frontal cortex is the area where planning, thinking?, etc., occurs. It takes about six years to build strong connections between these two important parts of the human brain. This new research on the nature of neurological development tells us that young children need extensive experience of sustained interactions like conversations with each other and with the important adults in their lives. But, again, there must be something of interest to them to talk about.

Principle #9. Young children benefit from opportunities to work on a topic or other type of activity over extended periods of time.

While many of the activities that we provide for preschool age children take a relatively short time, for example when they play outdoors, or play with blocks or toys, it is important to include some activities that will extend over time, that they will return to over the next few days, and maybe even for several weeks. This is another reason why project work is important. When I visit preschool classrooms I always look for what activities the children will return to, to continue working on, the next day or next few days. Such continuous activities should engage their interest.

Their activities do not have to be fun or exciting. They should be interesting and satisfying. Interest means the ability to lose oneself in the